

Amendments to the Specification:

Please replace the paragraph, beginning at page 4, line 22, with the following rewritten paragraph:

An equivalent circuit 40 of inductive probe 30 is shown in FIG. 4. As shown, coil 42, with one end grounded, is connected in series with transmission line 44 and coil 46. Similar to coil 42, coil 46 has one end grounded and another end coupled to transmission line 44.

Please replace the paragraph, beginning at page 9, line 9, with the following rewritten paragraph:

Filtering system 50, shown in FIGS. 5A, 5B and 5C ~~5A-5C~~ is one embodiment of the present invention. As shown, filtering system 50 receives an input signal through connector 68a and generates a filtered output signal through connector 68b. The input signal is coupled from the input connector through a plurality of resonators that include resonating rods and bandwidth rods. Six resonating rods are shown designated, in a clockwise direction, as 52a, 52b, 52c, 52d, 52e, 52f ~~52a-52f~~. Also included are five bandwidth rods 62a, 62b and 62c ~~62a-62e~~ (two rods are omitted for purposes of clarity).

Please replace the paragraph, beginning at page 9, line 16, with the following rewritten paragraph:

Interleaved between resonating rods 52a, 52b, 52c, 52d, 52e, 52f ~~52a-52f~~ are the bandwidth rods. Disposed between resonating rods 52c and 52d is bandwidth rod 62a. Disposed between resonating rods 52d and 52e is bandwidth rod 62b, and disposed between resonating rods 52e and 52f is bandwidth rod 62c. It will be appreciated that two additional bandwidth rods are disposed, respectively, between resonating rods 52a and 52b and between resonating rods 52b and 52c. These bandwidth rods are not shown, but are typically inserted in openings 84a and 84b.

Please replace the paragraph, beginning at page 11, line 3, with the following rewritten paragraph:

Oriented substantially perpendicular to horizontal probe 76 is transverse tuning conductor 72. It will be appreciated that transverse tuning conductor 72 may be a center conductor of a conventional ~~coax-coaxial~~ line. As shown in FIG. 5C, the ~~coax-coaxial~~ line includes, in sequence from an outer diameter to an inner diameter, Teflon sleeve 86, ~~coax-coaxial~~ shell 88, shrink tubing 90 and center conductor 72 (also referred to as transverse tuning conductor 72). ~~Coax~~ Coaxial shell 88 and transverse tuning conductor 72 are both conductors, while Teflon sleeve 86 and shrink tubing 90 are both dielectrics.

Please replace the paragraph, beginning at page 11, line 11, with the following rewritten paragraph:

A transverse through hole in septum 60, and another transverse through hole in horizontal probe 76 are provided, as shown in FIGS. 5C and 7A, for receiving transverse tuning conductor 72 and its surrounding shrink tubing, ~~coax-coaxial~~ shell and Teflon sleeve. As best shown in FIG. 7A, however, Teflon sleeve 86 does not go into the transverse through hole horizontal probe 76, but is cut short so that ~~coax-coaxial~~ shell 88 may be exposed for soldering to horizontal probe 76.

Please replace the paragraph, beginning at page 11, line 21, with the following rewritten paragraph:

Completing the description of FIGS. 5A, 5B and 5C ~~5A-5C~~, there is shown a plurality of openings, designated in a clockwise direction as 70a, 70b, 70c, 70d, 70e, 70f and 70g ~~70a-70g~~. It will be appreciated that each opening is sufficiently long to communicate with a respective resonating rod or bandwidth rod. A set screw is inserted into each opening for grounding the respective resonating rod or bandwidth rod. As shown, for example, in FIG. 5C, opening 70c receives set screw 92 for grounding resonating rod 52b. In a similar manner, opening 70g receives a set screw (not shown) for grounding transverse tuning conductor 72 (best shown in FIG. 6B). Similarly, opening 70f receives a set screw (not shown) for grounding transverse tuning conductor 74. It will be understood that housing 54 includes additional openings (not shown) for receiving set screws for grounding resonating rods 52d, 52e and 52f ~~52d-52f~~ and bandwidth rods 62a, 62b and 62c ~~62a-62c~~.

Please replace the paragraph, beginning at page 12, line 9, with the following rewritten paragraph:

Referring next to FIGS. 6A and 6B, tunable coupler 64 is shown in greater detail. As shown, tunable coupler 64 includes horizontal probe 76, coupled between two resonating rods (not shown in FIGS. 6A and 6B), and includes transverse tuning conductor 72. Transverse tuning conductor 72 may be a center conductor of a conventional 0.085-10 ~~coax~~ coaxial, for example. Such ~~coax~~ coaxial, of course, is of 85 mils diameter and 10 ohm resistance. Transverse tuning conductor 72 is surrounded by shrink tubing 90, ~~coax~~ coaxial shell 88 and outer Teflon sleeve 86 (moving from an inside diameter to an outside diameter).

Please replace the paragraph, beginning at page 12, line 17, with the following rewritten paragraph:

Horizontal probe 76, as shown, is inserted into iris 94 of septum 60 and is surrounded by dielectric Teflon sleeve 78, so that the horizontal probe is insulated from septum 60. As shown in FIG. 6A, Teflon sleeve 78 is divided into two sectional Teflon sleeves 78a and 78b for easier insertion into iris 94. Horizontal probe 76 includes transverse through hole 101 for receiving transverse tuning conductor 72, shrink tubing 90 and ~~coax~~ coaxial shell 88. Through hole 101 in horizontal probe 76 is aligned with through hole 102 in septum 60.

Please replace the paragraph, beginning at page 13, line 1, with the following rewritten paragraph:

After exposing ~~coax~~ coaxial shell 88, by removing a portion of outer Teflon sleeve 86, ~~coax~~ coaxial shell 88 may be soldered to horizontal probe 76 with solder 100. In this manner, horizontal probe 76 is in electrical contact with ~~coax~~ coaxial shell 88. Transverse tuning conductor 72, however, is insulated from horizontal probe 76 by shrink tubing 90. ~~Coax-Coaxial~~ shell 88 is insulated from septum 60 by outer Teflon sleeve 86. In addition, horizontal probe 76 is insulated from septum 60 by dielectric Teflon sections 78a and 78b.

Please replace the paragraph, beginning at page 13, line 18, with the following rewritten paragraph:

Referring next to FIG. 7A, there is shown a cross sectional view of tunable coupler 64. As shown, tunable coupler 64 includes transverse tuning conductor 72 and horizontal probe 76. Transverse tuning conductor 72 is surrounded by shrink tubing 90, ~~coaxial~~ shell 88 and outer Teflon sleeve 86. The lower portion of tuning conductor 72, is exposed and free of any shrink tubing, ~~coaxial~~ shell or outer Teflon sleeve, as it is moved downwardly within septum 60 for adjusting the capacitive or inductive coupling to the resonating rods. After adjusting the position of tuning conductor 72, the tuning conductor may be grounded by a set screw (not shown) by way of hole 70g (FIG. 6B).

Please replace the paragraph, beginning at page 14, line 3, with the following rewritten paragraph:

Shown perpendicularly oriented to tuning conductor 72 is horizontal probe 76, which extends between resonating rod 52b and resonating rod 52e. Horizontal probe 76 is insulated from septum 60 (shown in FIG. 6B and not in FIG. 7A) by Teflon sleeve 78a and Teflon sleeve 78b. As also shown, ~~coaxial~~ shell 88 is soldered to horizontal probe 76 with solder 100. Resonating rod 52b is grounded by a set screw (not shown in FIG. 7A) that is inserted into hole 70c (shown in FIG. 5A), so that end 104a is grounded. The other end 104b of resonating rod 52b is open circuited. Similarly, resonating rod 52e is grounded by a set screw (not shown), so that end 106a is grounded and the other end 106b is open circuited.

Please replace the paragraph, beginning at page 14, line 12, with the following rewritten paragraph:

An equivalent circuit of tunable coupler 64, in relation to resonating rods 52b and 52e, is shown in FIG. 7B. As shown, horizontal probe 76 forms transmission line 76a in series with transmission line 76b. Transverse tuning conductor 72 is adjustable and forms variable capacitor 72a between transmission lines 76a, 76b and a ground potential. One end of horizontal probe 76 forms capacitor 104 with respect to resonating rod 52b. Similarly, another end of horizontal probe 76 and resonating rod 52e form capacitor 106, as shown.

Please replace the paragraph, beginning at page 14, line 19, with the following rewritten paragraph:

Having described filtering system 50, as shown in FIGS. 5A, 5B, 5C, 6A, 6B, 7A and 7B, another embodiment of the present invention will now be described by referring to FIGS. 8, 9, 10A and 10B. While filtering system 50 includes tunable capacitive probes, the embodiment next described includes tunable inductive probes.

Please replace the paragraph, beginning at page 15, line 12, with the following rewritten paragraph:

Oriented substantially perpendicular to horizontal probe 112 is transverse tuning conductor 72. It will be appreciated that tuning conductor 72 may be a center conductor of a conventional ~~coaxial~~ line. As best shown in FIG. 9, the ~~coaxial~~ line includes, in sequence from an outer diameter to an inner diameter, Teflon sleeve 86, ~~coaxial~~ shell 88, shrink tubing 90 and center conductor 72 (also referred to as tuning conductor 72, or transverse tuning conductor 72). ~~Coaxial~~ shell 88 and tuning conductor 72 are both conductors, while Teflon sleeve 86 and shrink tubing 90 are both dielectrics. Tuning conductor 72 may be a

center conductor of a conventional 0.085-10 ~~coax~~coaxial, for example. Such ~~coax~~coaxial is of 85 mils diameter and 10 ohm resistance.

Please replace the paragraph, beginning at page 15, line 22, with the following rewritten paragraph:

A through hole in septum 60 and another through hole in horizontal probe 112 are provided, as shown in FIG. 9 (and similar to that shown in FIG. 6B) for receiving tuning conductor 72 with its surrounding shrink tubing, ~~coax~~coaxial shell and Teflon sleeve. Teflon sleeve 86, however, does not go through horizontal probe 112, but is cut short, so that ~~coax~~coaxial shell 88 may be exposed for soldering to horizontal probe 112 using solder 100.

Please replace the paragraph, beginning at page 16, line 17, with the following rewritten paragraph:

Referring next to FIG. 10A, there is shown a sectional view of tunable coupler 116. As shown, tunable coupler 116 includes tuning conductor 72 and horizontal probe 112. Tuning conductor 72 is surrounded by shrink tubing 90, ~~coax~~coaxial shell 88 and outer Teflon sleeve 86. The lower portion of tuning conductor 72 is exposed and free of any shrink tubing, ~~coax~~coaxial shell or outer Teflon sleeve, as it has been moved downwardly within shrink tubing 90 and within septum 60 for adjusting the capacitive or inductive coupling of the resonators. After adjusting the position of tuning conductor 72, the tuning conductor may be grounded by a set screw (not shown) by way of a hole 70g (FIG. 9).

Please replace the paragraph, beginning at page 17, line 3, with the following rewritten paragraph:

Horizontal probe 112 is electrically insulated from septum 60 (shown in FIG. 8 and 9) by Teflon sleeve section 78a and Teflon sleeve section 78b. As also shown, ~~coax~~coaxial shell 88 is soldered to horizontal probe 112 by solder 100. As further shown in FIG. 10A, resonating rod 52b is grounded by a set screw (not shown in FIG. 10A) inserted into hole 70c (shown in FIG. 8), so that end 104b becomes grounded. The other end 104a of resonating rod 52b is open circuited. Similarly, resonating rod 52e is grounded by a set screw (not shown), so that end 106b becomes grounded and the other end 106a is open circuited. Furthermore, outer portion 112a of horizontal probe 112 is grounded by loop wire 114a, and outer portion 112b of horizontal probe 112 is grounded by loop wire 114b.